

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	(jay with min with lee).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/07 14:22
L13	507	(367/103,150).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/12/07 16:27
L14	33	13 and (gas or gaseous)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/07 16:32
L16	56	(((acoustic or ultrasound or (ultra with sound) or sonic) with lens) with (gas or gaseous)) and (focus\$5 or converg\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/07 16:47
L19	113	((acoustic\$5 or sound) with lens with (gas or gaseous))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/07 17:00
L20	126	((acoustic\$5 or sound) with (lens or prism) with (gas or gaseous))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/07 17:01

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L22	4	((acoustic\$5 or sound) with (lens or prism) with (gas or gaseous)).clm.	US-PGPUB	OR	ON	2006/12/07 17:04
L23	67	((acoustic\$5 or sound) and (lens or prism) and (gas or gaseous)).clm.	US-PGPUB	OR	ON	2006/12/07 17:04
L24	71	((acoustic or sound or ultrasound or (ultra with sound) or sonic) and lens and (gas or gaseous)).clm.	US-PGPUB	OR	ON	2006/12/07 17:06
L25	21	(((acoustic or sound or ultrasound or (ultra with sound) or sonic) with lens) and (gas or gaseous)).clm.	US-PGPUB	OR	ON	2006/12/07 17:06

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-223695

(43)Date of publication of application : 30.08.1996

(51)Int.Cl.

H04R 17/00  
G01N 29/24

(21)Application number : 07-046154

(71)Applicant : HITACHI CONSTR MACH CO LTD

(22)Date of filing : 10.02.1995

(72)Inventor : YAMAMOTO HIROSHI

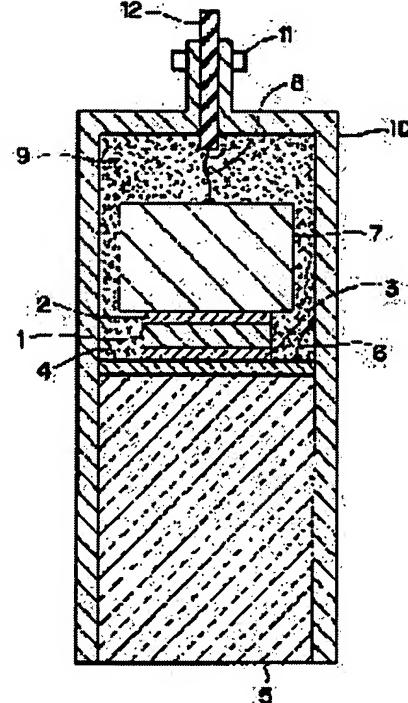
HAYAKAWA YASUO

## (54) ULTRASONIC PROBE AND ITS PRODUCTION

### (57)Abstract:

**PURPOSE:** To reduce the deterioration with age at the junction parts among an ultrasonic oscillator, an acoustic lens and an ultrasonic absorbing material and also to secure the excellent acoustic characteristic.

**CONSTITUTION:** An ultrasonic oscillator 1 and an acoustic lens 5 made of quarz are set on a pressure jig and both junction faces are closely put together with pressure after the pollution layers such as the oxides, etc., are eliminated on the junction faces by means of a beam source. Thus the oscillator 1 and the lens 5 can be put together with pressure. In the same way, the oscillator 1 and an ultrasonic absorbing member 7 are put together with pressure. An Au/Cr evaporation film 4 is formed on one of both sides of the lens 5, and the films 4 (metallic films for formation of electrode 2 and 3) are formed on both sides of the oscillator 1. Therefore, the oscillator 1, the lens 5 and the member 7 can be joined together with pressure. In such a constitution, it is possible to obtain an ultrasonic probe which has the excellent acoustic characteristic that never changes for a long period of time.



### LEGAL STATUS

[Date of request for examination]

19.12.2001

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-324797

(43)Date of publication of application : 13.11.1992

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(51)Int.Cl. H04R 1/34  
G10K 11/16  
G10K 11/30  
H04R 1/30

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(21)Application number : 03-094027

(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing : 24.04.1991

(72)Inventor : SAWANO SUKEYUKI  
OHASHI KIYOSHI  
INOUE HIDEAKI

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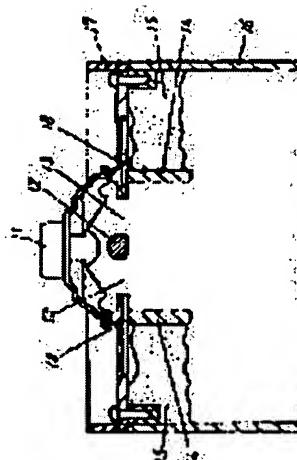
## (54) SPEAKER EQUIPMENT

### (57)Abstract:

PURPOSE: To improve the sound quality by providing an acoustic guide to a specific position of a speaker.

CONSTITUTION: An acoustic guide lens 12 is provided on a front face of a speaker 11 and a baffle plate 17 is provided with a hole 13 to lead a sound wave radiating from the speaker 11 to the acoustic guide panel 16.

Moreover, in order to disperse part of the sound wave, a hole 18 is provided and a reflection plate 14 and a sound absorbing member 15 are arranged to both sides of the hole 13. Large dip and peak on a frequency characteristic and an impedance characteristic are eliminated and deterioration in sound quality is suppressed by providing a structure dispersing part of the sound wave radiating to part of the front side of the speaker unit in this way.



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[Date of request for examination]